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DB Name	Query	Hit Count	Set Name
USPT,JPAB,EPAB,DWPI	l13 or l15 or l16 or l17 or l18 or l22	46	L23
USPT,JPAB,EPAB,DWPI	l1 and l21	3	L22
USPT,JPAB,EPAB,DWPI	(l7 same l12 same l14) same (l10 or l9)	4	L21
USPT,JPAB,EPAB,DWPI	l1 and (l7 same l12 same l14)	144	L20
USPT,JPAB,EPAB,DWPI	l1 and (l7 same l12)	635	L19
USPT,JPAB,EPAB,DWPI	l4 same l12 same l9	10	L18
USPT,JPAB,EPAB,DWPI	l3 same l12 same l9	6	L17
USPT,JPAB,EPAB,DWPI	l2 and l5 and l14 and l12	12	L16
USPT,JPAB,EPAB,DWPI	l6 and l12	9	L15
USPT,JPAB,EPAB,DWPI	hybridiz$3 or anneal$3	140435	L14
USPT,JPAB,EPAB,DWPI	l5 same padlock	16	L13
USPT,JPAB,EPAB,DWPI	oligonucleotide$1	29592	L12
USPT,JPAB,EPAB,DWPI	l5 same target	13177	L11
USPT,JPAB,EPAB,DWPI	ligat$3	25904	L10
USPT,JPAB,EPAB,DWPI	circulariz$3	1745	L9
USPT,JPAB,EPAB,DWPI	probe$1	211199	L8
USPT,JPAB,EPAB,DWPI	l5 same (triplex$2 or "triple helix" or "triple helices")	1767	L7
USPT,JPAB,EPAB,DWPI	l5 same catenat$1	9	L6
USPT,JPAB,EPAB,DWPI	DNA	92261	L5
USPT,JPAB,EPAB,DWPI	replication	31457	L4
DWPI,EPAB,JPAB,USPT	transcription	27585	L3
DWPI,EPAB,JPAB,USPT	(LANDEGREN-U | LANDEGREN-ULF | LANDEGREN-ULF-D | LANDEGREN-U-D)!	46	L2
USPT,JPAB,EPAB,DWPI	((514/44)!.CCLS. |(536/23.1 |536/24.3 |536/24.5)!.CCLS.)	7481	L1

09/029579

STN search 09/029579 November 22, 2000
databases searched, search terms, and selected abstracts below

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   (FILE 'HOME' ENTERED AT 20:35:40 ON 22 NOV 2000)
   FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 20:35:50 ON 22 NOV 2000
L1       221 S LANDEGREN U?/AU
L2    120941 S OLIGONUCLEOTIDE?
L3      1701 S CATENAT?
L4      1722 S CIRCULARIZ?
L5    219062 S REPLICATION
L6         0 S TRAQNSCRIPTION
L7    449217 S TRANSCRIPTION
L8   1629138 S DNA
L9    983991 S HYBRIDIZ? OR ANNEAL? OR COMPLEMENT?
L10       87 S PADLOCK
L11        9 S L1 AND L2 AND (L3 OR L4)
L12       15 S L2 AND L7 AND (L3 OR L4)
L13     5005 S L2 AND L7 AND L9
L14      891 S L2 AND L7 AND L5
L15       24 S L2 AND L5 AND (L3 OR L4)
L16   319000 S PHARMACEUT?
L17      368 S L2 AND L16 AND L9
L18        1 S L17 AND (L3 OR L4)
L19      105 S L2 AND L16 AND (L7 OR L5)
L20        0 S L19 AND (L3 OR L4)
L21       39 S L19 AND L9
L22       24 S L21 AND PY<1997
L23       68 S L11 OR L12 OR L15 OR L18 OR L22
L24       47 DUP REM L23 (21 DUPLICATES REMOVED)
L25       37 S L24 AND PY<1997
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YOU HAVE REQUESTED DATA FROM 37 ANSWERS - CONTINUE? Y/(N):y

L25  ANSWER 5 OF 37  MEDLINE
ACCESSION NUMBER:  95191225     MEDLINE
DOCUMENT NUMBER:  95191225
TITLE:          Gene technology: chances for diagnosis and therapy.
AUTHOR:         Werner R G
CORPORATE SOURCE:  Dr. Karl Thomae GmbH, Department Biotechnical
Production,
          Biberach an der Riss, Germany..
SOURCE:         METHODS AND FINDINGS IN EXPERIMENTAL AND CLINICAL
          PHARMACOLOGY, (1994 Sep) 16 (7) 525-37. Ref: 30
          Journal code: LZN. ISSN: 0379-0355.
PUB. COUNTRY:     Spain
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          Journal; Article; (JOURNAL ARTICLE)
          General Review; (REVIEW)
          (REVIEW, TUTORIAL)
LANGUAGE:       English
FILE SEGMENT:     Priority Journals
ENTRY MONTH:     199506
```

AB In the case of a single gene defect, a number of appropriate gene probes are available for prenatal diagnosis. In some cases, knowledge of the genetic disorders enables early onset of therapy or the option for abortion. However, gene technology which enables the diagnosis should not be viewed from an ethical point of view but rather the action taken when diagnostic results are available. Gene therapy for a single gene defect still is at the early stage of development. Only a few patients have been treated in various indications. Difficult to overcome are the low frequency and unspecific integration of inserted DNA into the chromosome, lack of sufficient **transcription** control, and short half-life of the integrated gene. From an ethical perspective gene therapy complies with the therapeutic concept of medicine. Antisense **oligonucleotides** are under clinical development for blockage of the synthesis of oncogenes and viral proteins. Stability of **oligonucleotides** as well as selectivity for specific cells will have to be overcome for broader application. Its therapeutic application is in accordance with the ethical principles of medicine. Substitution therapies with recombinant DNA derived human proteins are in therapeutic application to replace their counterparts from native source in a safer way or for human pharmacologically active proteins which cannot be isolated from their natural source. For recombinant DNA derived proteins where the mode of action is known, short development time frames can be expected allowing for an early return on investment. The expected market potential for recombinant DNA derived **pharmaceuticals** in 1995 will reach 4,400 million DM. Due to their specificity, monoclonal antibodies are used for tumor imaging when labeled by 99mtechnetium or for tumor therapy when labeled by rhenium or yttrium. Both concepts are under clinical evaluation. Vaccines derived from recombinant DNA technology offer the chance of producing safer vaccines consisting of the antigen determinant only. In general, recombinant DNA technology and biotechnology offer the opportunity of providing new diagnostic and therapeutic principles of high ethical value. The biotechnical manufacturing processes used for this purpose are friendly to the environment by using raw material from renewable sources, low energy consumption, and producing biodegradable products only. In almost all cases, host cells used for manufacturing belong to the safety category 1, in which no danger is expected for the operator, the public, and the environment.(ABSTRACT TRUNCATED AT 400 WORDS)

L25 ANSWER 6 OF 37 MEDLINE

ACCESSION NUMBER: 94378005 MEDLINE
DOCUMENT NUMBER: 94378005
TITLE: Padlock probes: **circularizing oligonucleotides** for localized DNA detection.
AUTHOR: Nilsson M; Malmgren H; Samiotaki M; Kwiatkowski M; Chowdhary B P; **Landegren U**
CORPORATE SOURCE: Beijer Laboratory, Department of Medical Genetics, Biomedical Center, Uppsala, Sweden.
SOURCE: SCIENCE, **(1994 Sep 30)** 265 (5181) 2085-8.
Journal code: UJ7. ISSN: 0036-8075.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199412
AB Nucleotide sequence information derived from DNA segments of the human and other genomes is accumulating rapidly. However, it frequently proves difficult to use such short DNA segments to identify clones in genomic libraries or fragments in blots of the whole genome or for in situ analysis of chromosomes. **Oligonucleotide** probes, consisting of two target-complementary segments, connected by a linker sequence, were designed. Upon recognition of the specific nucleic acid molecule the ends of the probes were joined through the action of a ligase, creating circular DNA molecules **catenated** to the target sequence. These probes thus provide highly specific detection with minimal background.

L25 ANSWER 9 OF 37 MEDLINE
ACCESSION NUMBER: 89240442 MEDLINE
DOCUMENT NUMBER: 89240442
TITLE: **Oligonucleotide** analogues as potential chemotherapeutic agents.
AUTHOR: Zon G
CORPORATE SOURCE: Applied Biosystems, Foster City, California 94404..
SOURCE: PHARMACEUTICAL RESEARCH, **(1988 Sep)** 5 (9) 539-49.
Ref: 164
Journal code: PHS. ISSN: 0724-8741.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
AB **Oligonucleotides** specifically bind to **complementary** sequences of either genomic DNA or genomic RNA through hydrogen bonding of

base pairs. In principle, relatively short oligomers (less than 20 bases) can specifically **hybridize** with DNA or RNA and thus be used for novel drug design strategies involving targeted interference of genetic expression at the level of **transcription** or translation. Conceivable chemotherapeutic applications predicated on sequence-specific **hybridization** ("antisense" inhibition) require **oligonucleotide** analogues that are resistant to in vivo degradation by enzymes such as nucleases. Nuclease-resistant analogues having modified internucleoside linkages (e.g., methylphosphonates or phosphorothioates) or modified nucleosides (e.g., 2'-0-methylribose or alpha-anomers) are now readily available by means of automated synthesis, and there are various classes of pendant groups (e.g., alkylating or intercalating agents) that can be attached to increase the efficacy of these analogues. The present account reviews this area of research by classifying structures and mechanisms of action, with comments on stereochemistry. Biological studies are briefly summarized, and **pharmaceutically** related topics of interest are noted.

L25 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:471450 CAPLUS
DOCUMENT NUMBER: 129:105957
TITLE: Gene sequences and assays for the RNA component of human telomerase
INVENTOR(S): Villeponteau, Bryant; Feng, Junli; Funk, Walter; Andrews, William H.
PATENT ASSIGNEE(S): Geron Corp., USA
SOURCE: U.S., 43 pp. Cont.-in-part of U. S. Ser. No. 272,102, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5776679	A	19980707	US 1995-482115	19950607
US 5583016	A	19961210	US 1994-330123	19941027 <--
CA 2194393	AA	19960125	CA 1995-2194393	19950706 <--
WO 9601835	A1	19960125	WO 1995-US8530	19950706 <--

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,

LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9529647	A1	19960209	AU 1995-29647	19950706 <--
AU 696702	B2	19980917		
EP 778842	A1	19970618	EP 1995-925552	19950706

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

CN 1158617	A	19970903	CN 1995-194952	19950706
BR 9508254	A	19971223	BR 1995-8254	19950706
JP 10505488	T2	19980602	JP 1995-504403	19950706
HU 78054	A2	19990728	HU 1997-35	19950706
US 5972605	A	19991026	US 1996-714482	19960916
FI 9700026	A	19970303	FI 1997-26	19970103
NO 9700041	A	19970306	NO 1997-41	19970106
AU 9897129	A1	19990318	AU 1998-97129	19981216
AU 714540	B2	20000106		

PRIORITY APPLN. INFO.: US 1994-272102 19940707
US 1994-330123 19941027
US 1995-472802 19950607
US 1995-482115 19950607
AU 1995-29647 19950706
WO 1995-US8530 19950706
US 1995-521634 19950831

AB Mammalian telomerase ribonucleoproteins have RNA and protein components. The authors claim the purified recombinant nucleic acid encoding the RNA component of a mammalian telomerase or a fragment of that nucleic acid. Esp. human telomerase RNA component cDNA and gene sequences are included. The gene is localized to the distal end of the q arm of chromosome 3. Cloning of the RNA component of human telomerase required a novel method involving neg. selection and cycles of pos. selection. Nucleic acids or **oligonucleotides** of the invention can serve a variety of useful functions, for example, as **pharmaceutical**, therapeutic, and diagnostic reagents. In an example, fibrosarcoma cell line HT1080 was transfected with plasmids expressing antisense RNA for the human telomerase RNA component. In another example, PCR primers were used to identify and isolate RNA component nucleic acids from non-human mammals.

L25 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:33777 CAPLUS
DOCUMENT NUMBER: 126:60292
TITLE: Preparation of single-stranded circular **oligonucleotides**
INVENTOR(S): Kool, Eric T.
PATENT ASSIGNEE(S): Research Corporation Technologies, Inc., USA
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9630384	A1	19961003	WO 1996-US3757	19960321 <--

W: AU, CA, JP
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

US 5683874	A	19971104	US 1995-413813	19950330
AU 9653174	A1	19961016	AU 1996-53174	19960321 <--

PRIORITY APPLN. INFO.: US 1995-413813 19950330
US 1991-675843 19910327
US 1992-859922 19920326
US 1993-4800 19930111
WO 1996-US3757 19960321

AB The present invention provides single-stranded circular **oligonucleotides** each with at least one parallel binding (P) domain and/or at least one corresponding anti-parallel binding (AP) domain sepd. from each other by loop domains. When more than one P or AP domain is included in a circular **oligonucleotide** of the present invention, the addnl. P or AP domains can constitute loop domains for a pair of corresponding P and AP domains, and vice versa. The present invention further provides single-stranded circular **oligonucleotides** with at least one Hoogsteen anti-parallel (HAP) domain. Each P, AP and HAP domain has sufficient **complementarity** to bind one strand of a defined nucleic acid target wherein the P domain binds in a parallel manner to the target and the HAP or AP domain binds in an anti-parallel manner to the target. Moreover, the present single-stranded circular **oligonucleotides** can bind to both single-stranded and double-stranded target nucleic acids. The present invention also provides methods of making and using these **oligonucleotides** as well as kits and **pharmaceutical** compns. contg. these **oligonucleotides**. Single-stranded circular **oligonucleotides** is capable of binding to a target DNA or RNA and thereby regulating DNA **replication**, RNA **transcription**, protein translation, etc. They can be labeled for use such as probes to detect or isolate a target nucleic acid. They are resistant to exonucleases and thus superior to linear **oligonucleotides** for diagnostic and therapeutic applications. Thus, a circular **oligonucleotide** (I) antisense to the b2a2 chimeric bcr/abl junctional sequences of chronic myeloid leukemia genes, was prepd. by nonenzymic template directed cyclization of the corresponding linear precursor. I at 4 .mu.M in vitro was effective in inhibiting the proliferation of chronic myeloid leukemia K562 cells.

L25 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:584140 CAPLUS
DOCUMENT NUMBER: 125:214257
TITLE: Synthetic **oligonucleotides** as human immunodeficiency virus **transcription** inhibitors and methods of their use
INVENTOR(S): Temsamani, Jamal; Metelev, Valeri; Levina, Asya; Agrawal, Sudhir; Zamecnik, Paul
PATENT ASSIGNEE(S): Hybridon, Inc., USA; Worcester Foundation for Biomedical Research
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9623878	A1	19960808	WO 1996-US1008	19960124 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN				
CA 2211877	AA	19960808	CA 1996-2211877	19960124 <--
AU 9647678	A1	19960821	AU 1996-47678	19960124 <--
EP 807172	A1	19971119	EP 1996-903669	19960124
R: AT, BE, CH, DE, FR, GB, LU, MC, IE				

PRIORITY APPLN. INFO.: US 1995-380650 19950130
WO 1996-US1008 19960124

AB Disclosed are methods of inhibiting **transcription** using a synthetic **oligonucleotide complementary** to the Watson strand of a double-stranded DNA genome. Also disclosed are synthetic **oligonucleotides** which specifically inhibit **transcription** of the HIV-1 genome. **Pharmaceutical** compns. contg. the synthetic **oligonucleotides** of the invention and methods of treating HIV infection using the **oligonucleotides** or **pharmaceutical** compns. of the invention are also provided.

L25 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:319008 CAPLUS
DOCUMENT NUMBER: 125:1366

TITLE: Antitumor antisense **oligonucleotides** that regulate S-adenosylmethionine decarboxylase gene **transcription**
INVENTOR(S): Mett, Helmut; Haener, Robert; Dean, Nicholas Mark
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9605298	A1	19960222	WO 1995-EP2985	19950727 <--
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9532227	A1	19960307	AU 1995-32227	19950727 <--
EP 775204	A1	19970528	EP 1995-928481	19950727
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10503934	T2	19980414	JP 1995-506956	19950727
US 6018042	A	20000125	US 1997-914961	19970820

PRIORITY APPLN. INFO.: US 1994-287753 19940809
WO 1995-EP2985 19950727

AB The invention relates to deoxyribo- and ribo-**oligonucleotides** and derivs. thereof, as well as **pharmaceutical** prepns., therapies, diagnostics and com. research reagents in relation to disease states which respond to modulation of the synthesis of the enzyme S-adenosylmethionine decarbodylase (SAMDC). In particular, the invention relates to antisense **oligonucleotides** and **oligonucleotide** derivs. specifically **hybridizable** with nucleic acids relating to (preferably human) SAMDC, esp. SAMDC cDNA. These **oligonucleotides** and their derivs. have been found to modulate the synthesis of SAMDC in cells and to be effective against e.g. tumor diseases.

L25 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:858804 CAPLUS
DOCUMENT NUMBER: 123:248551
TITLE: Nucleic acid probes that can be formed into a covalently closed sequence after formation of a stable

hybrid with the target sequence
INVENTOR(S): **Landegren, Ulf**; Kwiatkowski, Marek
PATENT ASSIGNEE(S): Swed.
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9522623	A1	19950824	WO 1995-SE163	19950216 <--
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 745140	A1	19961204	EP 1995-910057	19950216 <--
EP 745140	B1	20001108		
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
JP 09509063	T2	19970916	JP 1995-521755	19950216
US 5871921	A	19990216	US 1996-693302	19960823

PRIORITY APPLN. INFO.: SE 1994-522 19940216
WO 1995-SE163 19950216

AB A method of detecting a target nucleic acid sequence in a sample by hybridization using probes that are linear but that can be covalently closed to form a circular mol. after hybridization is described. The probe is linear with the free ends capable of hybridizing to two adjacent sequences with the successful hybrid appearing as a single-stranded nick. After hybridization, the gaps are sealed to form a covalently closed circular nucleic acid. Free probe is then removed by washing or treatment with an exonuclease, or both and the hybrid detected. The **oligonucleotide** may be labeled with a reporter group or affinity for quantitation. The hybridization, sealing and washing may be repeated as necessary before detecting the **circularized** probe. A no. of variations on this basic procedure using stabilizer and helper sequences and the use of **oligonucleotides** conjugated to a carrier are considered. Optimization expts. are reported.

L25 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:696411 CAPLUS
DOCUMENT NUMBER: 124:56581
TITLE: Methods of making single-stranded circular **oligonucleotides** via **circularization** of precircle **oligonucleotides** in presence of end-joining-**oligonucleotide**, and their nucleic acid **hybridization** properties

INVENTOR(S): Kool, Eric T.
PATENT ASSIGNEE(S): Research Corporation Technologies, Inc., USA
SOURCE: U.S., 45 pp. Cont.-in-part of U.S. Ser. No. 859, 922, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5426180	A	19950620	US 1993-4800	19930111 <--
CA 2105364	AA	19950302	CA 1993-2105364	19930901 <--
US 5683874	A	19971104	US 1995-413813	19950330
US 5872105	A	19990216	US 1995-467346	19950606

PRIORITY APPLN. INFO.: US 1991-675843 19910327
US 1992-859922 19920326
US 1993-4800 19930111
US 1995-413813 19950330
OTHER SOURCE(S): CASREACT 124:56581

AB The present invention provides single-stranded circular **oligonucleotides** each with at least one parallel binding (P) domain and at least one corresponding anti-parallel binding (AP) domain sepd. from each other by loop domains. When more than one P or AP domain is included in a circular **oligonucleotide** of the present invention, the addnl. P or AP domains can constitute loop domains for a pair of corresponding P and AP domains, and vice versa. Each P and AP domain has sufficient **complementarity** to bind to one strand of a defined nucleic acid target wherein the P domain binds in a parallel manner to the target and the corresponding AP domain binds in an anti-parallel manner to the target. Moreover, the present single-stranded circular **oligonucleotides** can bind to both single-stranded and double-stranded target nucleic acids. The present invention also provides methods of making these **oligonucleotides**, comprising binding a linear precircle to an end-joining-**oligonucleotide**, joining two ends of said precircle and recovering said single-stranded circular **oligonucleotide**, and using these **oligonucleotides** as well as kits and **pharmaceutical** compns. contg. these **oligonucleotides**.

L25 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:248554 CAPLUS
DOCUMENT NUMBER: 122:23844
TITLE: Antisense molecules directed against a tenascin gene

for use in the control of the proliferation of vascular smooth muscle cells
INVENTOR(S): Denner, Larry A.; Rege, Ajay A.; Dixon, Richard A. F.; Stacy, David L.
PATENT ASSIGNEE(S): Texas Biotechnology Corp., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9421664	A1	19940929	WO 1994-US3206	19940324 <--
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9465242	A1	19941011	AU 1994-65242	19940324 <--

PRIORITY APPLN. INFO.: US 1993-37025 19930325
WO 1994-US3206 19940324

AB Polynucleotides (< 50 nucleotides) that **hybridize** with the tenascin gene are described for use in inhibiting vascular smooth muscle cell proliferation by inhibition of expression of the tenascin gene in vascular smooth muscle cells. These nucleotides can be of use in the control of vascular tissue repair, e.g. in prevention of restenosis after balloon angioplasty. **Pharmaceutical** compns. contg. these polynucleotides dissolved or dispersed in a physiol. tolerable diluent are also described. Several such nucleotides, derived from the human and rat tenascin genes, were synthesized and tested in vitro on cultures of smooth muscle cells from Sprague-Dawley rats. All of the sequences tested were effective at inhibition of proliferation with the effective concn. in the range 10 - 100 .mu.M. In vivo tests in the rat carotid balloon angioplasty model of restenosis showed that one of these **oligonucleotides** was effective in preventing neointimal development.

L25 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:486063 CAPLUS
DOCUMENT NUMBER: 119:86063
TITLE: Single-stranded circular **oligonucleotides**
INVENTOR(S): Kool, Eric T.
PATENT ASSIGNEE(S): Research Corp. Technologies, Inc., USA
SOURCE: PCT Int. Appl., 109 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9217484	A1	19921015	WO 1992-US2480	19920326 <--
W: AU, BR, CA, FI, HU, JP, KR, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2105864	AA	19920928	CA 1992-2105864	19920326 <--
AU 9219874	A1	19921102	AU 1992-19874	19920326 <--
AU 661490	B2	19950727		
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AB Single-stranded circular **oligonucleotides** are provided, each with a parallel (P) and an antiparallel (AP) binding domain sepd. from each other by loop domains. Each P and AP domain has sufficient **complementarity** to bind to 1 strand of a defined nucleic acid target, wherein the P domain binds in a parallel manner to the target and the AP domain binds in an antiparallel manner to the target. Moreover, the single-stranded circular **oligonucleotides** can bind to both single- and double-stranded target nucleic acids. Also provided are methods using the **oligonucleotides** and antimicrbial **pharmaceutical** compns. contg. the **oligonucleotides**.